TVAC25100
TVAC25110

User manual

Version 11/2010

Original English user manual. Keep for future use.

English

Introduction

Dear Customer,

Thank you for purchasing this product.

This product meets the requirements of the applicable European and national guidelines. The corresponding declarations and documents can be obtained from the manufacturer (www.abus-sc.com).

To maintain this condition and to ensure risk-free operation, you as the user must observe these operation instructions!

Before initial start-up, read through the complete operating instructions observing operating and safety instructions.

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All rights reserved.**

If you have any questions, please contact your installer or your local dealer!

Disclaimer

This user manual was prepared with greatest care. If you should notice omissions or inaccuracies, please inform us about these on the back of this manual given address.
The ABUS Security-Center GmbH assumes no liability for technical and typographical faults and reserves the right to make at any time modifications to the product or user manual without a previous announcement.
The company is not liable or responsible for direct and indirect subsequent damages which are caused in connection with the equipment, the performance and the use of this product.
No guarantee for the content of this document is taken.

Icon explanation

A flash in the triangle is used if there is danger for the health, e.g. by an electric shock.

An exclamation mark in the triangle points to an important note in this user manual which must be minded.

This symbol can be found when you are to be given tips and information on operation.

Important safety advice

The warranty will expire for damage due to non-compliance with these operating instructions. ABUS will not be liable for any consequential loss!

ABUS will not accept liability for damage to property or personal injury caused by incorrect handling or non-compliance with the safety-instructions.
In such cases the warranty will expire.

The device has been manufactured in compliance with international safety standards. Please read these safety advices carefully.

Safety advice

1. Mains supply
   100 – 240V AC, 50 - 60 Hz
   Operate this product only from the type of power supply indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your local power company. Disconnect the product from the mains before you start any maintenance or installation procedures.

2. Overloading
   Do not overload a wall outlet, extension cord or adapter as this may result in electric fire or shock.

3. Liquids
   Protect the device from any kind of liquids entering.

4. Cleaning
   Disconnect the product from the wall outlet before cleaning. Use a light damp cloth (no solvents) to dust the product.

5. Accessories
   Do not use any unsupported accessories as these may be hazardous or cause damage the product.

6. Location
   - Setup the device only in dry and dust-protected rooms.
   - Do not place the device near a radiator or heat register.
   - Setup the device only in areas with the advised operating temperatures of -10° ~ 50°C.

Warnings

Follow all safety and operating advises before starting-up the device!

1. Follow these directions in order to avoid damage of the power cord or plug:
    - Do not modify or process the power cord or plug arbitrarily.
    - Make sure to disconnect the power cord holding the plug.
    - Keep heating appliances as far as possible from the power cord in order to prevent the cover vinyl from melting.

2. Follow these directions. Failure to follow any of them may cause electrical shock:
    - Do not open the main body or the power supply.
    - Do not insert metal or inflammable objects inside the product.
    - In order to avoid any damage during lighting use a surge protection.

3. Do not use the product when it is out of order. If you continue to use the product when defective, serious damage can be caused to it. Make sure to contact your local product distributor if the product is out of order.

During the installation into an existing video surveillance system make sure that all devices are disconnected from the low and supply voltage circuit.

If in doubt allow a professional electrician to mount, install and wire-up your device. Improper electrical connection to the mains does not only represent at threat to you but also to other persons.
Wire-up the entire system making sure that the mains and low voltage circuit remain separated and cannot come into contact with each other in normal use or due to any malfunctioning.

Unpacking

While you are unpacking the device please handle it with utmost care.

If you notice any damage of the original packaging, please check at first the device.
If the device shows damages, please contact your local dealer.

English

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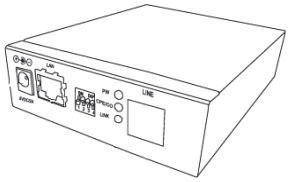
1. Intended use

This transmission set “IP via Coax” or “IP via dual wire” is used for the transmission of network data via standard coaxial cables or twisted pair cables. This allows IP data from network cameras to be transmitted easily using existing cables – replacement with expensive network cables is therefore completely unnecessary. You can also use this transmission set effectively at locations where a wireless connection is not possible, or no WLAN is available.

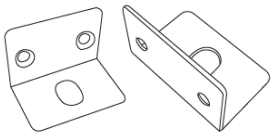
A detailed description of all functions can be found in chapter „3 Features and functions“.

2. Scope of delivery



Receiver & Transceiver units

Power supply incl.
EU, AU and UK plugs



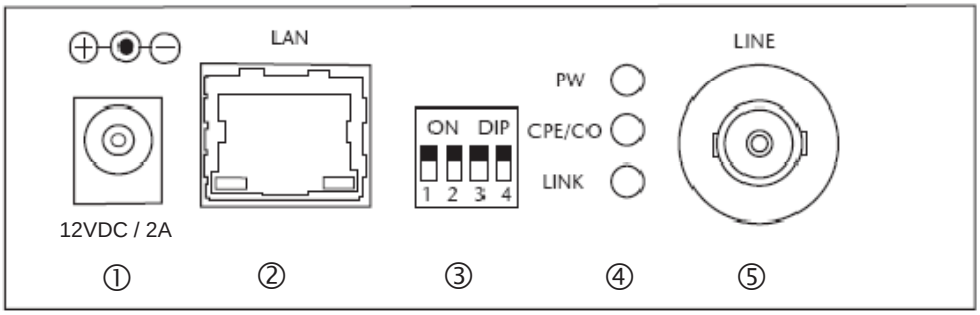
Walls mount incl. fixing screws

3. Features and functions

- Use of existing BNC or dual-wire lines for transmitting IP video signals
- High bandwidth
- Increased transmission distance (up to 1500 m) compared to network cables
- Delay-free real time video transmission
- Ideal for transmission where radio transmission is not possible
- Reduction of the installation costs, since no cost intensive network cables must be installed

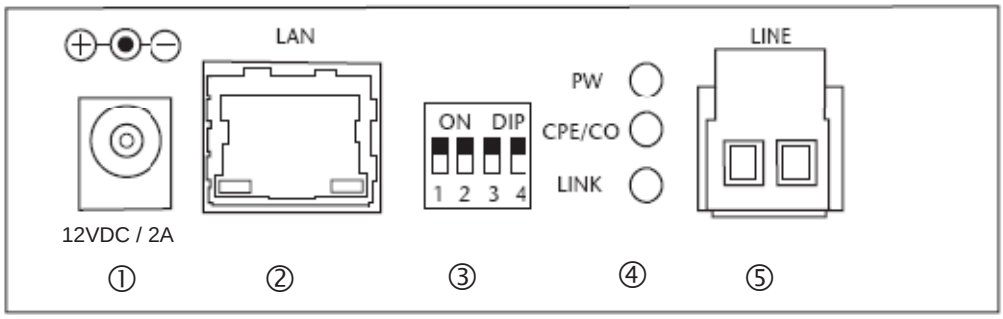
4. Physical descriptions

4.1 TVAC25100 connections



①	Power supply	12 VDC / 2A (DC, 5.5 x 2.1 mm)
②	LAN input	RJ-45 socket for connection to the IP network device
③	DIP switches	For changes to device settings
④	Status LEDs	Device status display
⑤	BNC transmission output	Connection for data transfer via coaxial cable

4.2 TVAC25110 connections



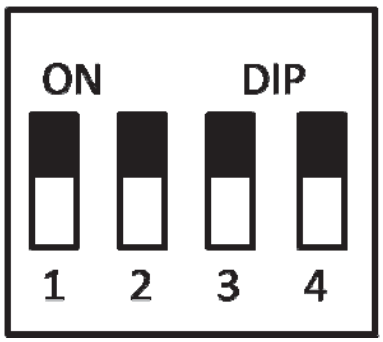
①	Power supply	12 VDC / 2A (DC, 5.5 x 2.1 mm)
②	LAN input	RJ-45 socket for connection to the IP network device
③	DIP switches	For changes to device settings
④	Status LEDs	Device status display
⑤	Dual-wire transmission output	Connection for data transfer via a dual-wire line

4.3 Housing backside

On the rear side of the housing there is an optional earth connection for earthing the housing

5. Description of the DIP switches and status LEDs

5.1 DIP switches



Number	Function	ON position	OFF position
1	Master (CPE) / Slave (CO)	Control unit (Master)	End device (Slave)
2	Transmission	Fast mode	Interleave mode
3	Transmission rate	Unlimited	Limited
4	Signal-to-noise-ratio	6 dB	9 dB

DIP 1: Master / Slave

ON position	Control device	Use this switch position to connect the device to a PC or a router which accesses the network camera on the slave side.
OFF position	End device	Select this switch position to use the device on the network camera.

DIP 2: Transmission

ON position	Fast mode	Use this setting to establish a fast data connection. Please observe that data loss could occur using this setting.
OFF position	Interleave mode	Use this setting if there is a high data rate, and thereby avoid any data loss on the transmission range.

DIP 3: Transmission rate

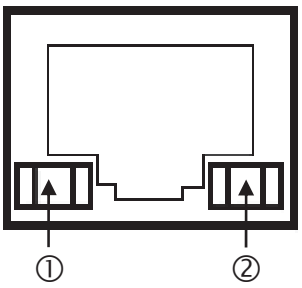
ON position	Unlimited	Use this setting to utilise a maximum data connection with a transmission rate of up to 100 MB/s download/60 MB/s upload.
OFF position	Limited	Use this setting in the event that data losses occur on the transmission line. The transmission rate is then decreased to 50 MB/s download / 30 MB/s upload in order to reduce the data loss.

DIP 4: Signal-to-noise-ratio (SNR)

ON position	6 dB	Standard noise reduction which is used to compensate interference on the line.
OFF position	9 dB	Increased noise reduction; the signal-to-noise ratio is increased in this mode. This will be necessary in the event that increased data loss occurs on the wiring section. The maximum transmission path is then reduced in this mode.

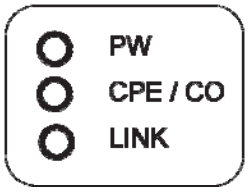
5.2 Status LEDs

These status LEDs on the network connection indicate the current connection status of the network components.



	Status LED	Bandwidth speed
①	ON	Half-duplex 100 MB/s
	OFF	Full-duplex 100 MB/s
②	ON	Open circuit
	OFF	No connection
	Flashing	Data transmission

These status LEDs indicate the current connection status of the two devices.



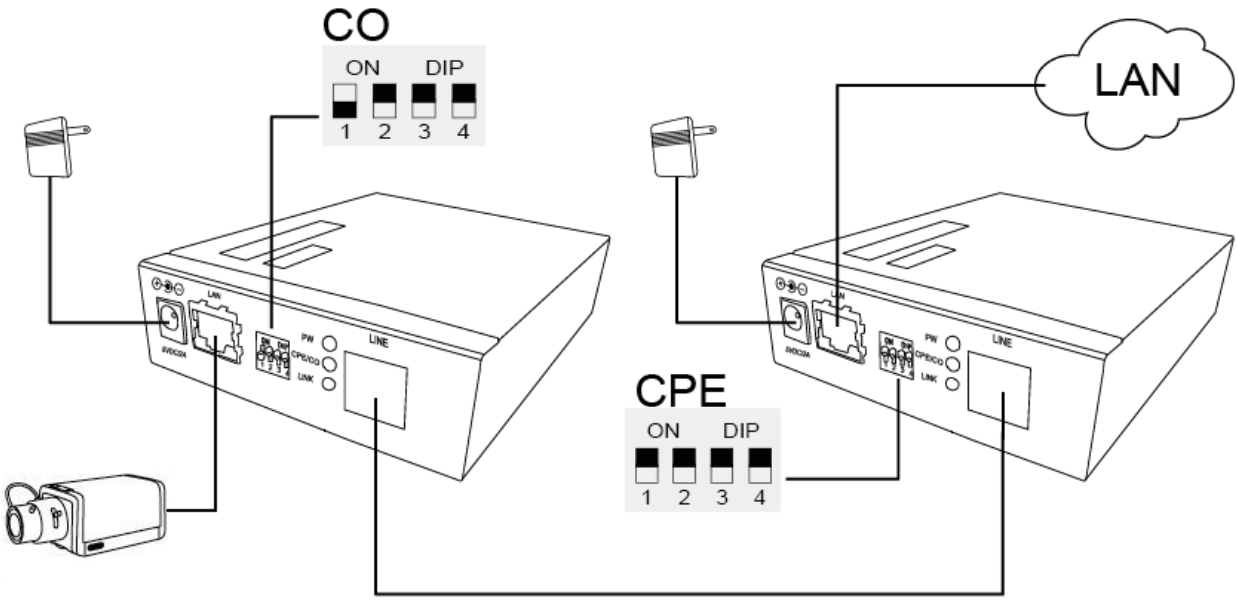
Description	LED on	LED flashing	LED off
PW	Switched on	-	Switched off
CPE / CO	CPE (Master)	-	CO (Slave)
LINK	Connected	Connection setup	-

If the LED “Link” flashes rapidly, the devices are attempting to set up a connection to each other. If they flash slowly, no connection has been set up.

Warning:
Please make sure that the receiver side (router, PC, etc.) is always set as the control unit (Master) (DIP switch 1 = ON).

6. Installation

6.1 Installation set up



On the device which is connected to the network camera, first set DIP switch 1 to OFF. Connect the IP camera and the device using a network cable.

Please only use the power supply units supplied for the installation of the devices.

Depending on the type of device, now connect the two devices using a coaxial cable (RG59) or a dual-wire or telephone line (twisted pair dual-wire cable, min. AWG24).

Warning:
Please observe that if coupled cables are used, data loss could occur during transmission.

Dual-wire cable connection set up

Warning:
Please observe that connection could take up to 30 seconds.

1. If the “Link” LEDs on both devices flash simultaneously, a data connection is being set up.

2. If both “LINK” LEDs light up continuously, a connection has been successfully set up.

7. Data transmission rate

Please observe that the data transmission rate depends on the length of the cable. The longer the cable, the lower the data transmission rate. If cables have been spliced, data loss could occur on the line.

The following bandwidths are available in Fast mode:

Distance	Bandwidth
200 m	Up to 100 MB/s
400 m	Up to 83 MB/s
600 m	Up to 60 MB/s
1,000 m	Up to 40 MB/s
1,200 m	Up to 28 MB/s
1,500 m	Up to 22 MB/s

8. Maintenance and cleaning

8.1 Maintenance

Regularly check the product's physical state, e.g. check for damage of the housing.

If you suspect that safe operation cannot be guaranteed anymore, disconnect the product and ensure that it cannot be used by mistake.

You can assume that safe operation is not possible anymore when

- the device shows visible damage,
- the device does not function anymore

Please note:

The product is maintenance free for you. Inside the product are no parts that can be checked or repaired, so do not ever open it.

8.2 Cleaning

Wipe the product with a clean, dry cloth. If the device is very dirty, you can moisten the cloth with lukewarm water.

Make sure that no liquids can enter the equipment as the device can be destroyed. Never use chemical detergents as they could attack the surface of the device

9. Disposal

Devices with this marking should not be put in the household garbage. Dispose of the product at the end of its lifetime according to the applicable regulations.

10. Technical data

Model number	TVAC25100	TVAC25110
Inputs	RJ-45, DC input, Earth connection	
Outputs	BNC (75 Ohm)	Terminal for dual-wire cable
Type of cable	Coaxial cable (RG59)	Dual-wire cable (Twisted pair min. AWG24)
LED displays	PW: Power supply CPE/CO: Master/Slave LINK: Data transmission	
Transmission rate @ distance	Max. 100 MB/s @ 200 m Max. 22 MB/s @ 1,500 m	
Ethernet	10/100 MB/s	
Power supply	12 VDC/2 A	
Power consumption	Max. 4.2 W	
Operating temperature	-10 °C–50 °C	
Operation Humidity	Max. 85%, non-condensing	
Dimensions (W x H x D)	136 mm x 30 mm x 95 mm	
Weight	315 g	